GSFC DAAC Time Line for Daily Operations

(Draft prepared by EGS I&T)

Revised Strawman version dated March 26, 1998

Objective: **Generate a realistic time line of activities for the operations readiness tests and EGS I&T certification tests at the GSFC DAAC**.

This first draft is an attempt to identify the daily activities needed at the GSFC DAAC to support the AM1 science data processing, archive and product distribution. This covers all activities needed after the GDAAC is fully operational. However, at the time of pre-launch certification, only the launch-critical scenarios identified by GDAAC may be part of the timeline used for the 3-day, day-in-the-life tests. The timeline should serve as an input to the DAAC and EGS I&T teams in planning the DAAC operations readiness tests and EGS certification tests. The activities in general show the logical flow of events which occur on a daily basis. However, there are some events shown which may not occur on a daily basis. The timeline also attempts to indicate the dependency of one activity on another. For example, the generation of L1B product for a granule cannot be done before the generation of the L1A product for the same granule.

The reference documents used in the preparation of the timeline are:

a. *MODIS SDPS Version 1 System description (Document Number SDST-065, Change Notice 2, dated July 30, 1997).*
b. *MODIS SDP S/W Requirements Specification V2 and Beyond (Document Number SDST-089, dated November 10, 1997).*
c. *GSFC DAAC (GDAAC) Operations Rehearsal Plan for EOS AM-1 (DRAFT) dated October 15, 1997.*

NOTES:

1. **Column 2:** (Task/Activity) is based on the GDAAC document (*reference c*) and the MODIS system description document SDST-065. The corresponding launch-critical scenario number is also identified in this column.
2. **Column 3:** (Comments/Explanations) is based mainly on the information in the documents SDST-065.
3. **Column 4:** is used to identify the applicable EGS I&T tests as well as the DAAC operations procedures relevant to the task/activity.
4. **Hour of the day:** The timeline shows a day-in-the-life of the GDAAC. There are 24 columns shown for the 24 hours in a day. The 25^{th} column shows 0 to 1 hour of the next day just to accommodate the activities like L3 processing done after L2 processing is complete. The hour zero is arbitrary. It is not necessarily midnight.
5. **Ancillary data ingest** is shown to be occurring throughout the day simply because it can happen any time of the day. It does not mean that is a 24 hour activity. Later versions of this timeline will show a better scheduling of the ancillary data ingest activity.
6. **The L1 and higher level processing activities include archiving also**.
7. The L1A processing begins immediately after the reception of L0 data from EDOS and is not dependent on any other activity. The L1A process runs each time a 2-hour data set arrives from EDOS, and generates 24 L1A granules for each run.
8. The L1B processing is dependent on the completion of L1A processing of a granule and can be initiated as soon as an L1A granule is complete. That is why L1B is almost a parallel activity to L1A processing.
9. **Transfer of L2G products to EDC and NSIDC** are shown to occur at the end because they have to be done after all the data for the day has been processed.
10. **M&O Activities:** This can include all activities like doing back ups, providing user services, implementing software upgrades, and so on.

11. Generation of daily/weekly plans, generation of resource and production plans are shown to occur during the regular shift.
12. Report generation is shown to occur at the beginning of the day assuming that the reports will cover what happened during the preceding 24 hours.
13. The table is generated using the Microsoft Word and later can be implemented as a timeline chart using the Microsoft Project or some other application.
14. The products which are to be generated once in a week or once in 10 days or once in a month have not been shown in the chart, but will be shown in later versions after some discussions with the DAAC team.

This draft is intended to be used for discussions between the GSGC DAAC and EGS I&T teams. Inputs from the DAAC team has been incorporated in this draft.

#	Task / Activity / Operation	Comments / Explanations	Relevant Tests / ORE/LRE.	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
1	L0 Ingest and Archiving (G-LC-1)	2 hrs of data 12 times a day	EGS10, EGS11 LRE-1	
2	L1A Processing (PGE01) (G-LC-3)	2 hrs of data 12 times a day I/P: MOD00, MOD03LUT, MOD03DEM O/P: MOD01, MOD03	EGS10, EGS11 LRE-3	
3	L1B Processing (PGE02) *Dependent on PGE01* (G-LC-6)	once for each of 288 granules (3 successive granules input) I/P: MOD01, MOD02LUT O/P: MOD02, MOD02QC	EGS10, EGS11 LRE-6	
4	Ingest Ancillary data (G-LC-2)		EGS10, EGS11 LRE-2	ANY TIME IN THIS PERIOD
5	L2 Masks/Profiles (PGE03) (G-LC-9) (*Dependent on PGE02*)	Once for all L1B granules. i/p: MOD02, MOD03, MODANCCF, MODANCAV, MODANCOZ, MODANCST, MODANCQC o/p: MOD07_L2, MODVOLC, MOD35_L2, MODANCL2,	EGS10, EGS11 LRE-9	MANY TIMES IN THIS SLOT
6	L2 Atmosphere Processing (PGE04)	Once for each of 144 day granules i/p: MOD02, MOD03, MOD35_L2, MODANCL2, MOD05LUR, MOD05LUW o/p: MOD05_L2, MOD05_QC, MOD4L_L2, MOD4S_L2, MOD4S_QC	EGS10, EGS11	MANY TIMES IN THIS SLOT
7	L2 Cloud Processing (PGE06)	Once for each of 288 granules i/p: MOD02, MOD03, MOD35_L2, MODANCL2, MOD05LUB, MOD6CTL2, MOD06LUA o/p: MOD05_L2, MOD05_QC, MOD4L_L2, MOD4S_L2, MOD4S_QC	EGS10, EGS11	MANY TIMES IN THIS SLOT
8	L3 Interim Land Aerosol (PGE05) Dependent on PGE04	Once for one orbit's data output by PGE04 i/p: MOD4L_L2 o/p: MOD4L_0	EGS10, EGS11	

#	Task / Activity / Operation	Comments / Explanations	Relevant Tests /	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0
9	L2 Ocean Processing (PGE)	Once for each of 288 granules	EGS10, EGS11			M	A	N	Y		T	I	M	E	S		I N		T	H	I	S		S	L	O	T	
10	L2 Ocean Color (PGE09)	Once for each of 144 day granules	EGS10, EGS11			M	A	N	Y		T	I	M	E	S		I N		T	H	I	S		S	L	O	T	
11	L3 Ocean Color Binned product (PGE17)		EGS10, EGS11																									
12	L2 Sea Surface Temp (PGE10)	Once for each of 288 granules	EGS10, EGS11			M	A	N	Y		T	I	M	E	S		I N		T	H	I	S		S	L	O	T	
13	L3 SST binned product (PGE19)	Once per granule after PGE10 has completed	EGS10, EGS11			M	A	N	Y		T	I	M	E	S		I N		T	H	I	S		S	L	O	T	
14	L2 Snow Cover product (PGE07) (Day only land product, dependent on PGE01 and PGE02)	Once for each of 144 day granules i/p: MOD02, MOD03 o/p: MOD10_L2	EGS10, EGS11			M	A	N	Y		T	I	M	E	S		I N		T	H	I	S		S	L	O	T	
15	L2 Sea Ice Product (PGE08) (Day only land product, dependent on PGE01 and PGE02)	Once for each of 144 day granules i/p: MOD02, MOD03 o/p: MOD10_L2	EGS10, EGS11			M	A	N	Y		T	I	M	E	S		I N		T	H	I	S		S	L	O	T	
16	L2 Reflectance Product (PGE11)	Once for each of 288 granules	EGS10, EGS11			M	A	N	Y		T	I	M	E	S		I N		T	H	I	S		S	L	O	T	
17	L2 Land Surface Temp (PGE16)	Once for each tile				M	A	N	Y		T	I	M	E	S		I N		T	H	I	S		S	L	O	T	
18	L2G Pointers processing (PGE12A, PGE12B)																											
19	L2G reflectance/Fire (PGE13A, PGE13b, PGE13C)	Once for each tile	EGS10, EGS11																									
20	L2G Snow processing (PGE14)	Once for each tile																										
21	Transfer L2G products to EDC	MODMGGA, MODMGPNTR,	EGS10,																									

#	Task / Activity / Operation	Comments / Explanations	Relevant Tests /	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
		MOD09, MOD09G, MOD13, MOD14, MOD14G	EGS11	
22	Transfer L2G products to NSIDC	MOD10, MOD10G, MOD29, MOD29G	EGS10, EGS11	
23	Verification of inventory updates	This is one of the test objectives		
24	M & O activities (G-LC-13 / LRE-13)	Backup and system administration activities	EGS10, EGS11	
25	Generation of daily Ops plans	This could be a weekly activity also	EGS10, EGS11	
26	Resource / Production Planning		EGS10, EGS11	
27	Report Generation, etc.		EGS10, EGS11	
28	Establish subscription service (G-LC-16 / LRE-16)			
29	ASTER EDS transmission to ASTER GDS	Frequency and mechanism TBD		
30	User access of products and data distribution incl. Tape generation (G-LC-11 / LRE-11)	Any time of the day using B0SOT/JEST		
31	Transmit 10% of L1A, L1B data to TLCF for QA (G-LC-4,7 / LRE-4,7)		EGS10, EGS11	SOME TIME IN THIS PERIOD
32	Update QA metadata (G-LC-5,8,10 / LRE-5,8,10)		EGS10, EGS11	ANY TIME IN THIS PERIOD
33	ESDT addition/modification as needed (G-LC-15 / LRE-15)		EGS10, EGS11	ANY TIME IN THIS PERIOD
34	Divert processing of bad data to		EGS10, EGS11	ANY TIME IN THIS PERIOD

#	Task / Activity / Operation	Comments / Explanations	Relevant Tests /	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0
	private ESDT																											
35	Algorithm activation after SSI&T (G-LC-14 / LRE-14)		EGS10, EGS11		A	N	Y		T	I	M	E		I	N		T	H	I	S		P	E	R	I	O	D	
36	Bring a science processor down to check failover processing		EGS10, EGS11		A	N	Y		T	I	M	E		I	N		T	H	I	S		P	E	R	I	O	D	
37	Register a new algorithm (G-LC-14 / LRE-14)		EGS10, EGS11		A	N	Y		T	I	M	E		I	N		T	H	I	S		P	E	R	I	O	D	
38	Order tracking		EGS10, EGS11		A	N	Y		T	I	M	E		I	N		T	H	I	S		P	E	R	I	O	D	
39	Check DCE capabilities (system Administration) (G-LC-13 / LRE-13) (add/remove users, cells, etc)		EGS10, EGS11		A	N	Y		T	I	M	E		I	N		T	H	I	S		P	E	R	I	O	D	